DPA MICROPHONES

user's manual

DPA 4098H

Hanging Supercardioid Microphone

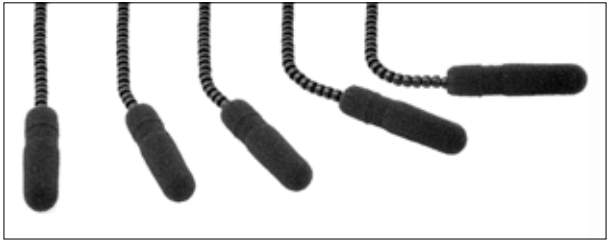
Product description

The DPA 4098H Supercardioid Microphone is designed for hanging applications in churches, performing arts centers, orchestra pits, and TV studios. The 4098H delivers clear and natural sound for live sound reinforcement of choirs, instrumental or vocal groups, speech or live audiences. Extremely low in profile, the integrated gooseneck provides the ability to easily aim the mics, ensuring perfect positioning with minimal visual impact since the mics' slim cable is nearly invisible. These microphones offer flat response and uniform off-axis sound combined with excellent gain-before-feedback characteristics for live sound reinforcement. The mic has an extremely high rejection of RF interference post the signal balanced XLR connector which offers more than 60 dB common mode rejection.

Adjusting the gooseneck and microphone angle

The gooseneck is extremely flexible and the microphone can be angled to any desired position. It has a unique angle memory and does not change its position or ability to be repositioned over time and use.

Adjust the microphone to the desired angle. Since goosenecks can generate loud crackling sound, adjustment should only be done when not connected to the audio chain.



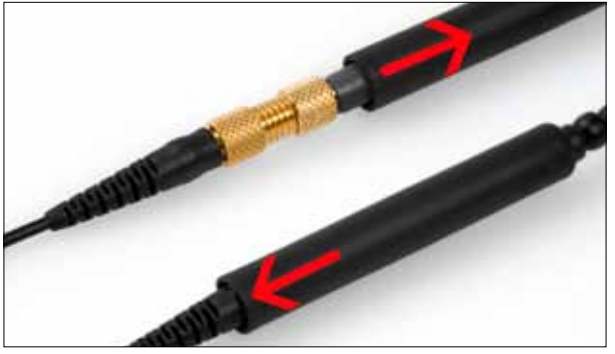
Application notes

Always use the 4098 with its dedicated foam windscreen.

For capturing smaller choirs at shorter distance, point the capsule to the last row of singers. The supercardioid pick-up pattern will attenuate the sounds and produce a natural balance between the nearest (loudest but attenuated) and the furthest (weakest but performing to the microphones most sensitive direction).

Using the DPA adapters and extension cables

The DPA 4098H microphone is terminated with a MicroDot connector. Connect the microphone output to adapter or extension cable by moving the protection cap, then secure the MicroDot and reposition the protection cap:



When used in conjunction with our range of more than 35 adapters, the Micro-Dot connector provides the ability to connect to virtually all available pro wireless systems.

Various wireless systems require the use of electronics inside the adapter to optimize the signal level, the DC offset, and powering of the built-in microphone pre-amplifier. Using the adapters from DPA ensures the correct electronic circuit with the listed types of wireless systems (please visit www.dpamicrophones.com/adapters).

Do not attempt to employ non-standard adapters or connectors as you might damage the microphone.

A connector-tightening tool is supplied with each microphone and adapter and should be employed whenever the MicroDot connector needs to be tightened. Utilize the tightening tool before each use to ensure the connection is secure and that the cable cannot rotate by the cable relief.

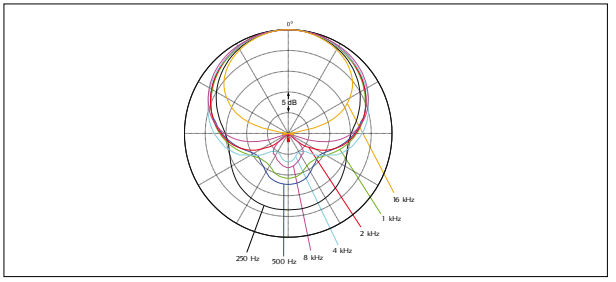
The included XLR adapter, DAD6001, allows the 4098H to work as a regular 48V phantom powered microphone. For stand mounting, attach the microphone to the DAD6001 and use the UA0639 Microphone Clip. For hanging, the DAD6001 adds weight and helps stabilize the microphone.

The microphone can also be hung with a miniature extension cable (not included) for minimal visual appearance.

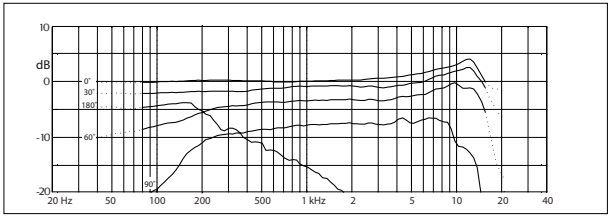
SPECIFICATIONS

Directional characteristics
Supercardioid
Principle of operation
Pressure gradient
Cartridge type
Pre-polarized condenser
Frequency range
20 Hz – 20 kHz
Frequency range, ±2 dB, 20 cm (7.9 in) distance
80 Hz – 15 kHz with 3 dB diffuse field boost at 8-15 kHz
Sensitivity, nominal, ±3 dB at 1kHz
20 mV/Pa; -34 dB re. 1 V/Pa
Equivalent noise level, A-weighted
Typ. 23 dB(A) re. 20 µPa (max. 26 dB(A))
S/N ratio (A-weighted), re. 1 kHz at 1 Pa (94 dB SPL)
71 dB(A)
Total Harmonic Distortion (THD)
<1 % up to 123 dB SPL peak
<1 % up to 120 dB SPL RMS sine
Dynamic range
Typ. 100 dB
Max. SPL, peak before clipping
134 dB
Output impedance
From MicroDot: 30 – 40 ohm
From DAD6001: 100 ohm
Cable drive capability
Up to 300 m (984 ft) with DAD6001 XLR adapter
Output balance principle
Signal balanced with DAD6001 XLR adapter
Common Mode Rejection Ratio (CMRR)
> 60 dB from 50 Hz to 15 kHz with DAD6001 XLR adapter
Power supply (for full performance)
Min. 5 V – max. 50 V through DPA adapter for wireless systems
48 V phantom power ±4 V with DAD6001 XLR adapter
Current consumption
1.5 mA (microphone)
3.5 mA with DAD6001 XLR adapter

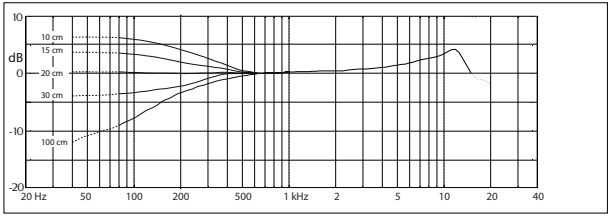
Connector
MicroDot
3pin XLR-M from DAD6001 XLR adapter
Color
Black (4098HB)
White (4098HW)
Weight
5 g (0.18 oz)
Capsule diameter
5.4 mm (0.2 in)
Microphone length
154 mm (6 in)
Gooseneck length
95 mm (3.7 in)
Polarity
Positively increasing sound pressure produces positive-going voltage at MicroDot pin (and pin 2 on DAD6001 XLR adapter)
Operating temperature range
-40 °C to 45 °C (-40 °F to 113 °F)
Operating relative humidity (RH)
Up to 90 %



Typical directional characteristics of 4098H (normalized).



Typical on- and off-axis frequency response of 4098H at 20 cm (7.9 in) distance.



Proximity effect exhibited by 4098H.

Accessories included

DAD6001	Adapter: MicroDot to XLR

Accessories available

UA0639	Microphone Clip
DUA0518B	Windscreen for 4098H, Black, 5 pcs.
DUA0518W	Windscreen for 4098H, White, 5 pcs.
DAO6005-B	Miniature Microphone Extension Cable, Black, 3.5 m (11.5 ft)
DAO6005-W	Miniature Microphone Extension Cable, White, 3.5 m (11.5 ft)
DAO6010-B	Miniature Microphone Extension Cable, Black, 10 m (32.8 ft)
DAO6010-W	Miniature Microphone Extension Cable, White, 10 m (32.8 ft)
DAO6020-B	Miniature Microphone Extension Cable, Black, 20 m (65.6 ft)
DAO6020-W	Miniature Microphone Extension Cable, White, 20 m (65.6 ft)

More than 35 different connection adapters to wireless systems, please refer to www.dpamicrophones.com/adapters.

Microphone maintenance

DPA 4098H is designed with highly resistant and protective materials in the construction so do not try to clean the microphone as it is unnecessary.

Do not use any spray or fluid containing chemicals that could remove static electricity on or close to the microphone. This could cause permanent damage.

Cleaning or washing of the windscreen can be done in distilled water.

The DPA 4098H is very resistant to humidity, but keep it away from unnecessary exposure to water and cleaning fluids (keep element dry at all times). It should not be used in direct, heavy rain.

Avoid excessive pressure on the microphone element. The microphone will not perform to its specifications if the directional tube under the foam windscreen has been bent from its original shape. If the directional tube becomes misshapen, replacement is necessary.

Contact DPA

Find your nearest DPA representative on our website, www.dpamicrophones.com, or send e-mail to info@dpamicrophones.com.

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US Sales Office:

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Fax: +1 303 485 6470

Service & repair
If you are not satisfied with the characteristics exhibited by this product, please contact your nearest DPA Microphones representative for support.

Warranty
d:fine is covered by a five-year limited warranty.

CE marking
This product conforms with all relevant directives approved by the European Commission.

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Product features and specifications are subject to change without notice.

DPA4098H

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